

Appln. No. 10/807,580

Amendment in Reply to the Final Office action dated July 22, 2005

AMENDMENTS TO THE CLAIMS

Listing of claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Claim 1 (Currently amended): A torque generating electric motor comprising: an output shaft having a rotational axis; force transfer means mounted on said output shaft for conversion of drive forces into torque applied to the output shaft; actuator means engageable with said force transfer means for imparting said drive forces thereto in response to energization thereof; positioning means mounting the actuator means in operative relation to the force transfer means for displacement at an angle to said rotational axis to vary the conversion of the drive forces imparted during said energization of the actuator means into the torque applied to the output shaft; and rotation resistance means in operative engagement with the output shaft for resisting rotation imparted thereto during deenergization of the actuator means.

Claim 2 (Previously presented): The electric motor as defined in claim 1, including: electromagnetic means for magnetically negating rotational resistance imposed on the output shaft by the rotation resistance means during said deenergization of the actuator means.

Claim 3 (Currently amended): The electric motor as defined in claim 2, wherein said force transfer means comprises: discs of different diameters splined to the output shaft having indented peripheries selectively engaged by the actuator means in response to said displacement thereof at an angle to said rotational axis by the positioning means.

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Claim 4 (Currently amended): The electric motor as defined in claim 3, wherein said actuator means comprises: a plurality of electromagnetically energized devices having driving push rods projecting therefrom in planar alignment with each other into force transferring engagement with one of the discs of the force transfer means.

Claim 5 (Original): The electric motor as defined in claim 4, wherein said rotation resistance means comprises: a rheological braking unit.

Claim 6 (Previously presented): The electric motor as defined in claim 1, wherein said force transfer means comprises: discs of different diameters splined to the output shaft having indented peripheries selectively engaged by the actuator means in response to said displacement thereof by the positioning means.

Claim 7 (Currently amended): The electric motor as defined in claim 1, wherein said actuator means comprises: a plurality of electromagnetically energized devices having driving push rods projecting therefrom in planar alignment with each other into force transferring engagement with the force transfer means.

Claim 8 (Original): The electric motor as defined in claim 2, wherein said rotation resistance means comprises: a rheological braking unit.

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Claim 9 (Currently amended): In combination with an electric motor having a rotor undergoing rotation about an axis in response to torque applied thereto by force transfer means through which drive forces imparted to actuators undergo conversion into the torque applied to the rotor, control means for selectively varying said conversion of the drive forces into the torque, comprising: track means for establishing guide paths at an angle to the rotor axis; and positioning means operatively connected to the actuators for displacement thereof along the guide paths to different positions relative to said rotor axis and the force transfer means at which the drive forces undergo said conversion into the torque applied to the rotor.

Claim 10 (Currently amended): The combination as defined in claim 9, wherein said force transfer means includes: a plurality of circular discs of different diameters fixed to the rotor having indented peripheries engaged by the actuators at said different positions along the guide paths in planar alignment with each other.